

A REVIEW OF LITERATURE IN THE FIELD  
OF INTERIOR DESIGN

by

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## CHAPTER I

### THE PROBLEM AND METHOD USED IN THE STUDY

In Puerto Rico there are many families who have the opportunity to build a house and in many cases, the houses they construct do not fit their needs and wants. This situation exists because of lack of knowledge. There are also many others who buy new houses in housing projects and must furnish them. Many times these people know nothing about the selection of furniture, color schemes, wall treatment, floor coverings and window treatment.

The Cooperative Agricultural Extension Service on the Island is working to help these families by supplying the information they are seeking. The author of this study has worked in the Agricultural Extension Service on the Island and is one of the personnel in charge of the orientation of the Puerto Rican families to improve their living conditions.

#### I. THE PROBLEM

Statement of the problem. It was the purpose of this study to review literature in the field of interior design to obtain knowledge and understanding of the different aspects of interior design in order to help Puerto Rican families improve their living conditions.

Some important aspects of interior design about which these families need information are: the appropriate use and arrangement of space according to needs, furniture arrangement, the allotting of the budget, color, windows and their treatment, floors and their coverings, lighting and the selection of lamps, and the appropriate use of decorative accessories.

Importance of the study. The importance of research in this area is readily seen in the fact that there is an increasing enthusiasm of the general Puerto Rican public for information which will help them to improve their living conditions. As a result, a new appreciation of the value of interior design has developed.

## II. METHOD USED IN THE STUDY

The areas selected for sampling the information were: (1) color and design, (2) furnishings, and (3) house planning.

The information gathered from the selected literature was discussed as it pertains to problems of interior design as they exist in the Island.

For purposes of the annotated bibliography, each book was discussed according to its content.

## CHAPTER II

### ANNOTATED BIBLIOGRAPHY

Beyer, Glenn H. Housing and Society. New York: Macmillan Co., 1965.

Comprehensive text about the different areas in the housing field. Review of some of the literature on the historical, economic, social, and design aspects of housing. Gives a good history of American housing and presents data from the 1960 federal censuses of population and housing. Three patterns of growth of cities are illustrated: concentric zone theory; sector theory; and multiple nucleus theory. Use of new materials and new building methods are discussed. Analyzes the neighborhood unit planning concept. Includes information in relation to house financing.

Birren, Faber. Color, Form and Space. New York: Reinhold Publishing Corporation, 1961.

Contains useful information in relation to the use of color in interior design. Explains the different theories of color. Points out that color is integral with form. Discusses the natural symbol of color in terms of a triangle where one angle is pure hue; the second angle is white; and the third angle is black. It has four simple derivations. Pure color and white combine to form tints. Pure color and black combine to form a shade. White and black combine to form gray. The final form, tone, is the product of all: color, white and black; or tint, shade and gray.

Clear and concise. Illustrations complemented the text. Some of them explain in detail the different color schemes, tints, shades and tones.

\_\_\_\_\_. New Horizons in Colors. New York: Reinhold Publishing Corporation, 1955.

The general principles involved in colors using specific examples to make color theories more easily understood are presented. Color is an integral part of design and form. The most personal of all uses of color is in the home. Discusses how color has become more utilitarian. Points out that common tasks are influenced by color and considers the different ways each particular color affects a task.

Many illustrations supplement the text.

Bittermann, Eleanor. Art in Modern Architecture. New York: Reinhold Publishing Corporation, 1952.

Presents illustrations of the architectural arts in the United States only. Divided into chapters according to materials. Examples chosen are the best integrations of art and architecture to date. Exclusive concern with fixed murals. Explains the role of painting and sculpture in architecture. Some architects considered sculpture more appropriate than mural paintings for architecture.

Painting and sculpture can be integrated with the building design.

Direct contact murals, canvas murals, fresco and fresco secco murals, mosaic murals, ceramic tile murals, and enamel on metal murals are considered. Stone sculpture, wood sculpture, metal sculpture, concrete sculpture, plaster sculpture and ceramic sculpture are discussed. The different kinds of sculpture: intaglio, low relief, high relief, free standing, ground based and suspended sculpture are explained. Many illustrations were included in the text.

Commercy, E. W. and C. Eugene Stephenson. How to Decorate and Light Your Home. New York: Coward-McCann, 1955.

Practical information on arrangement, color, furniture, accessories, lamps and lighting. Brilliant guide including descriptions analyzing the necessary steps to success in planning a beautiful home. Includes ideas for house renovations. Practical book in interior decoration which has as its basic premise that of utility combined with visual satisfaction. In it is information for those who like current furniture designs and information for those who prefer traditional. Three periods in life when the desire to decorate is quite important are: when a child establishes his small bit of space; when youth marries and begins to build his home; and when the mature individual gathers about himself the cherished objects and memories of a lifetime. Many illustrations are used to explain the text.

Cooper, Dan. Inside Your Home. New York: Farrar, Straus and Company, 1946.

House suitability, cheerfulness and ease of cleaning are emphasized. How to have the kind of home desired regardless of income. Three basic requirements a home ought to meet: to be suitable to the family; to be physically cheerful; to be clean, fresh, and easy to keep that way. A place for talking; a place for reading; a place to sleep; a place to eat, and a number of places to put things into or onto are house requirements discussed. Color and lighting are two other topics brought out.

Information presented in a clear and concise form. Pen drawings are used accompanied by statements that supplemented the text.

Dal Fabbro, Mario. Modern Furniture - Its Design and Construction. New York: Reinhold Publishing Corporation, 1949.

A reference book on modern furniture. Mainly provides dimensions for typical furniture pieces used in offices and dwellings. In general, only length, width and height are shown, but since the drawings are done in scale, the dimensions of parts can be rather easily determined. Contains a number of reproductions of photographs. Designers' and manufacturers' names are given for many of the pieces. At the back of the book is a sixteen page supplement of detailed drawings of furniture.

Eckbo, Garrett. Landscape For Living. New York: F.W. Dodge Corp., 1950.

Discusses information in relation to house gardening and landscape design. Three types of gardens are pointed out: the utility garden in which special plants are raised as a crop for their produce and in which the space for people could be the minimum necessary for cultivation;

the living garden, in which space for people is most important and plants and other features form a background for their activities. The show garden in which there is plenty of space for people who come to see some impressive sort of picture, composition, arrangement of plants, sculpture or construction is the third type of garden considered.

The natural material used in landscape design and the basic factors in the selection of plants are discussed.

Content is divided into four main parts: Part A, Background; why now, what is landscape design, history through the eighteenth century, developments since the eighteenth century, the world we live in, and the principles of design. Part B, Theory; the question of space and people, materials, earth-rock-water, plants and planting, structural elements. Part C, Practice: specific conditions, gardens, parks, public buildings, group housing. Part D, What next; from art to planning, from planning to art.

270 illustrations supplemented the text.

Ford, Katherine and Thomas Creighton. The American House Today. New York: Reinhold Publishing Corporation, 1951.

Floor plans, photographs of exteriors and interiors, and descriptions of eighty-five houses built during the years 1947-1951, following modern ideas of structure, design and use of materials. Accomplishments in design and construction of the modern house in the United States are summarized including a detailed discussion of the pictures shown.

Program, site, space organization, environment, construction methods, and materials that are factors affecting today's houses, and family social patterns, needs and wants are considered.

Giedion, Sigfried. Architecture, You and Me. Massachusetts: Harvard University Press, 1958.

A collection of essays about modern architecture which discusses the problems facing contemporary architecture and urban design and the development of the contemporary movement in architecture. An interesting book that shows how the history of architecture should be taught; not by the sterile naming of orders and styles but as basic interpretations posed by the problems of space and the materials used. A clear and perceptive idea about the rationale of modern architecture and what the freedom of new materials and form expresses. Nine points important in architecture monumentality are explained. Occasionally names of international modern art and architecture are mentioned and described.

The format, somewhat confusing, includes essay material, radio dialogue, quotes and conferences.

Grillo, Paul Jacques. What is Design. Chicago: Paul Theobald and Co., 1960.

Discusses design in terms of material, unit, scale, rhythm, dynamism, and harmony. Design is not an added quality, it is an essential part of it. Material possesses its own design language: structure, texture and aspect. Five material categories: rock material, organic material, metal material, synthetic material and hybrid material are discussed. Climate, orientation, proportion and composition in design are considered.

Dedicated to the young designer. There are an infinity of ways to reach art according to the author, all good, if they are authentic.

Includes a series of advices in the introduction.

The content is divided into three main parts: Archetypes; form, material, climate, orientation; Proportion; openings, the world of man, the world around us; Composition; energy, mass, motion, the idea.

Discusses that the world around us is a world of numbers that spell life and harmony. Proportion is considered as a rapport between two dimensions. The various areas where a certain kind of activity takes place in architecture are classified in three categories: private, public and service.

Many illustrations supplemented the text.

Hudnut, Joseph. Architecture and the Spirit of Man. Cambridge: Harvard University Press, 1949.

A group of essays of which partial content is as follows: Part I: On traditional and modern architecture. What buildings are beautiful? The obelisk of General Washington; The gothic university; The post-modern house; Space and the garden. Part II: On the architecture of cities: The invisible city; The political art of planning; What a young planner ought to know; Blueprint for a university; and The art in housing.

Useful self-educational book for those interested in design. Architecture -- perceived through the imaginative handling of enclosed space, through skillful distribution of light, through the better appreciation of vista, and through the unaffected proportion -- is considered.

The book's message is important not only in architectural terms, but as a source of information for house planning as well. Achieves the purpose of encouraging architectural appreciation.

Jones, Cranston. Architecture Today and Tomorrow. New York: McGraw-Hill Company, 1961.

Illustrated discussion of the works of 25 famous architects through a description of their outstanding building projects; a brief biography of each and an explanation of the reasons for their designs. Primarily about American architecture.

Written with enthusiasm, and plentiful quotes from the architects.

Modern architecture is constantly changing and its development is affected by a continual battle of classical versus romantic trends, by the structural inventiveness of the engineer - architects, and by the visions of the futurist.

There are plenty of photographs; some, in color, show the function of color in modern buildings.

Lewis, Ethel. Decorating the Home. New York: Macmillan Co., 1942.

Partial contents: Art elements: Design composition; Houses: Architectural styles; Color charts and harmonies; Walls and wall coverings; Floors and floor coverings; Textiles; Window treatments; Furniture styles; Specialized furniture and slip covers; Pictures as decoration; Lamps and shades and other accessories; Dining table details; Flower arrangement. Concerned with lasting beauty rather than with efforts to attain it inexpensively. Useful for homemakers who are interested in dealing with professional decorators or desire to do their own decorating on a firm basis of knowledge and taste. Illustrations supplemented the text.



Miller, Gladys. Furniture For Your Home. New York: M. Barrows and Co., 1946.

Practical suggestions on the selection, buying and arrangement of furniture. Discusses both antique and modern furniture as well as built-in furniture. Yields many useful ideas for furnishing an entire home or just making some changes in a room. General and inclusive book on the selection and use of furniture for specific arrangements in the average home. Has several points of special interest: the author assumes that the average home owner owns some furniture, and will not be starting from scratch; she suggests combining pieces of different periods and types. For each room a chart is given for suggested balanced arrangement. Clues to furniture values, what to look for and how, are given. Quick reference charts for identification of periods.

Mock, Elizabeth. If You Want to Build a House. New York: Simon and Schuster Inc., 1946.

Modern architecture is represented as not just another imitative style but an attitude toward life regulated by the physical and emotional needs of living people and trying to meet them as nearly as possible. Size is considered first, starting with the statement that the trouble with many small houses is that they are too small. The items of ventilation and degree of openness to the outside, furnishings and surroundings are taken up briefly. The wide choice of materials and quality available on the market is pointed out. A competent architect is indispensable according to this book.

An approach to attempt to persuade a client to satisfy his individual needs in regard to space, shape, light, materials and color rather than merely conform to tradition. 116 interior and exterior photographs of modern homes are a valuable complement to the text.

Moholy-Nagy, Sibylle. Native Genius in Anonymous Architecture. New York: Horizon Press, 1957.

A work in architectural and design fields where the author assembled more than 100 photographs of private dwellings which illustrate the natural beauty of buildings honestly constructed with respect to materials function, climate and environment.

Points out that the world is full of beautiful anonymous architecture and that these are important sources of information for modern architecture.

Discusses the general principles in architecture. The quality in architecture can be evaluated by four features: the roof, the corner, the base, and the access. Establishes the differences between the builder and the architect.

The book is divided into sections covering site and climate, form and function, materials and skills and a critique of the artistic quality of the examples chosen.

Nelson, George. Chairs. New York: Whitney Publications Inc., 1953.

Discusses chair design and construction methods. The chair is unique among all objects of furniture in that it substitutes for the action of certain muscles to hold the body in a position other than supine. The Baraw chair which permits the sitter to rest with the feet higher than

the head is one of the many styles considered in this book.

Herman Miller, Eero Saarinen, Alvar Aalto, George Nakashima, Mies Van der Rohe, Finn Juhl, Marcel Bruer, Robsjohn Gibbings, and Charles Eames are some of the designers discussed.

Content is discussed according to the different materials used in chair construction: Bentwood, laminated wood, molded plastic, solid wood, metal, and upholstery. Includes a list of designers, manufacturers and distributors.

Many illustrations of different kinds of chairs complemented the text.

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Living Spaces. New York: Whitney Publications Inc., 1952.

Importance is given to the function of space organization in architectural design. The writer explains the structure of a building. The contemporary demand in architecture is the freedom which comes only with space.

Some of the architectural works considered were designed by the following architects: Gordon Drake, Richard Neutra, Marcel Breuer, Russel Wright, Stanley Sharp and Frank Lloyd Wright.

Technical book in which the information given is comprehensive and scientific but is stated in non-technical terms. The text, supplemented by many illustrations, is an interesting and readable book.

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Problems In Design. New York: Whitney Publications, 1965.

General concepts of design and specific examples are explained in this very interesting and useful book.

The purpose of this book is to give an authoritative and comprehensive treatment to the problems in interior design. The book has special significance for students of architecture and design. The group of essays discusses problems ranging from the nature of modern perception to chair legs; are animated with the author's sense of humor.

Content is divided into the following parts: Part I: Problems of Design; Design as communication, good design, what is it for? ,art X-the Georgia experiment, captive designer vs. independent designer, ends and means, obsolescence, a new profession?, structure and fabric, the enlargement of vision, the designer in the modern world, high time to experiment. Part II: Art; some notes on relations between the visual arts, Venus-Persephone and September Morning; Part III: Architecture; Classic Holiday house, Wright's houses, stylistic trends in contemporary architecture. Part IV: Houses; down with housekeeping, the Japanese house, prefabrication, after the modern house, the second house. Part V: Planning; planning with you, main street; Part VI: Interiors; the dead-end room, modern decoration, notes on the new subscape.

Many illustrations are included in the text.

Neutra, Richard Joseph. Survival Through Design. New York: Oxford University Press, 1964.

This author is considered one of the foremost architects and designers in the world.

Discusses the significance of design in the survival of the human race. Pointed out that man does have the unique ability to control his own environment and that he feels his survival depends upon his advantage of planning his home, communities and objects according to his biological

needs. Tries to arouse citizens' interest in community planning.

Contains philosophical opening chapters which are a little difficult to understand. Filled with observations on the effect of surroundings on people. Includes many anecdotes.

One of the most important parts is concerned with the theory of design termed functionalism where the author states that "function follows form."

A stimulus to creative thought not only in the process of design but in establishing attitudes toward designs made by others. Devoted too little to thought of value judgments and tends to overlook two important actualities. The first is the unconscious and the part it plays in the emotional satisfactions of living. The second has to do with pure esthetics and contemplation. To the author, the aim of design is to produce objects whose effect would be the reduction of nervous and physical tensions.

Pahlmann, William. The Pahlmann Book of Interior Design. New York: Bryan Holme, 1955.

Written simply and informally for the layman. Presents the fundamentals of house decoration or interior design, turning a house or an apartment into a home. Ideas are presented to do over a house or to rejuvenate one room. Types of decoration, color schemes, room arrangement and furniture grouping are considered. The discussion is illustrated with many illustrations, chiefly photographs in black and white with some in color. The photographs graphically illustrate the author's words of advice.

Pevsner, Nikolaus. Pioneers of the Modern Movement: From William to Walter Gropius. New York: The Museum of Modern Art, 1949.

Traces the rise of the modern movement, particularly in architecture, but also in the other arts, from the Time of William Morris to the beginning of the war. Art by people and for the people. Style not easy to read.

Louis Sullivan, Victor Horta and Frank Lloyd Wright are some of the architects discussed. Important contributions of the architects are considered. William Morris, first artist to realize how precarious and decayed the social foundations of art had become during the centuries since the Renaissance and especially during the years since the Industrial Revolution is recognized as the Father of the Modern Movement. Walter Gropius, memorandum on standardization and mass production of small houses and on advisable ways of financing such building. Frank Lloyd Wright was also a leader in the development of modern architecture. Many illustrations supplemented the text.

Ponti, Gio. In Praise of Architecture. New York: F. W. Dodge Corporation, 1960.

Emphasizes that architects should be leaders of countries because they give shape to countries. Points out that architecture makes itself the substance of politics by concerning itself with the following goals:

(1) Distribution of space for life, work, and communications; the functioning of the country as a whole, that is town planning on a national scale; (2) Group order and works of art, culture, justice, governments, that is, the city; (3) The house as the natural right and substance of the family, housing for everybody; (4) The formation and education of the

group, schools, libraries, colleges, and universities; (5) The dignity of man's employment, perfect buildings for his work hours; (6) The man's personal welfare, maternity clinics, kindergartens, hospitals, convalescent homes, sanatoriums, and old people's homes; (7) The knowledge of the country, its history and art, transportation, hotels, monuments, and landscape; (8) Adult education, movie houses, theaters, auditoriums, libraries, museums and exhibitions; (9) Sports and recreation stadiums and swimming pools; (10) The coordination of work, unification of production by means of perfect prototypes; (11) The quality and individuality of work, handicraft at a very high level.

Robsjohn-Gibbings, Terence H. Homes of the Brave. New York: Alfred A. Knopf, 1954.

A study and criticism of the changes in American interior decoration over the past sixty years. One of the qualities of this book is the use of humorous and satirical drawings. Informative, amusing, concise, brief and convincing. Filled with statements of cultural criticism in an area that touches everyone who lives in a house. Interests anyone who thinks of his house as something more than just shelter. The combination of sharp satire and broad humor very often confuses the reader. The author feels that all trouble in American architecture will be solved if common sense is used in house designing.

Good source of information for all who are contemplating building a home.

Rogers, Kate Ellen. The Modern House U.S.A. - Its Design and Decoration. New York: Harper and Brothers, 1962.

Important source of interior design information. Includes houses, domestic designs and plans. Part I deals with the characteristics of the modern family and the needs and living patterns which have influenced the various types of architecture prevalent today. Part II deals with the plastic elements and the practical elements of the individual rooms of the house. Part III discusses the furnishings of the modern home and the elements and principles of good design with special emphasis on modern rather than traditional furnishings.

Excellent if its generalities are narrowed with other readings. For a specific problem or interest, the book may not meet the needs.

Saarenin, Eliel. The City, Its Growth, Its Decay, Its Future. New York: Reinhold Publishing Corporation, 1943.

An individual building is not a work of art. The function of the building has to be integrated into the function of the city. The author's ideal is the designing of such community environments as could make of the community and of the dwelling alike a culturally healthy place in which to live. City-planning or city building, as he understands it, must be a war against slums and urban decay. Attention is given to all the material problems that must be solved. The city is made for men, not men for the city. The architecture must wait until the social foundation has been built.

Stressing the importance of adequate city buildings from the point of view of the whole nation's welfare, material and cultural; social research is necessary; civic improvement and development must happen in accordance

with appropriate means and methods; fundamental principles should be followed in all city buildings; and the architectural nature of the city building should be emphasized.

Decentralization of a city is also considered.

Schroeder, Francis N. Anatomy For Interior Designers and How to Talk to a Client. New York: Whitney Publications Inc., 1951.

Includes very good information in relation to the correct size and proportion of furniture according to the shape of the human body. The standard measurement used for men is 5'9" and for women, 5'8".

How to determine the correct place for a television set is considered in one chapter. Rules discussed are as follows: for persons with normal eyesight, change the diameter of the television tube from inches to feet and sit within that range; farsighted persons should sit further back, but nearsighted persons should not get too close. The relationship between the interior designer and his client is also considered.

Content is divided into three main parts. The first is Anatomy for Interior Designers, the second, How to Talk to a Client.

Many illustrations supplement the text. Most of them include specific dimensions.

Sunset Ideas for Storage in Your Home. California: Lane Publishing Company, 1958.

Contains good ideas for household storage. The steps included in planning storage are considered. The first one pointed out is to decide exactly what storage is needed -- what items are to be stored, and the amount of space necessary to accommodate them. The different kinds of storage needed in a house are for kitchen utensils, food, linens, cleaning implements, supplies, sewing, bathroom supplies, children's toys, clothes, books, magazines and others.

Includes a construction guide for storage units giving details of measurements, materials, etc.

The content is divided into two main parts. The first explains the needs in houses of different storage units. The second is a construction guide for storage units. Many illustrations complemented the text. Shows clear and concisely the many acceptable ways to organize, plan, and build storage space in the house.

Tunnard, Christopher. City of Man. New York: Charles Scribner's Sons, 1953.

A picture of the conditions of urban living in an industrial age, and a combination of history, criticism and creative thought. A well written volume using non-technical terms which anyone interested in civic design or urban development can readily understand. Excellent guide to city planning. Is considered the most important work on urban planning to appear in the United States.

Three types of city planning are discussed in this book: the linear plan, curvilinear plan; and the metonian street pattern, sometimes called radio concentric. Three factors in city planning; the drive for individual expression; the drive for identification of the individual with the group and the drive for identification of group with group, are discussed. Illustrations of architectural work effectively supplemented the discussion.

Walsh, Harold Vandervoort. Your House Begins With You. New York: George W. Stewart, Inc., 1950.

A step-by-step guide to planning a home suited to the family's needs and interests.

It is a sensible approach and a plan for hopeful home-builders. 250 drawings, sketches and photographs illustrate the text.

The factors included in planning a house - money, time and space - are considered. Also, the factors included in planning the different activity areas in a house are explained in detail.

Wheeler, Virginia. Kitchen. New York: Abelard-Schuman, 1956.

How to choose, plan, equip and decorate a kitchen is the main idea of this book. An authority on kitchens, a former editor of House and Garden, considers different types of kitchens for different ways of life: an indoor-outdoor kitchen; teen age kitchen; gourmet kitchen and others. Gives plans and details of arrangements. Practical and useful, showing the revolutionary changes that have taken place with the new look and the new equipment available to the housekeeper. Contains photographs of many types of kitchens. It is a valuable source of information for architects, home owners, builders and students.

Wright, Frank Lloyd. The Natural House. New York: Horizon Press, 1955.

Discusses the ideas and beliefs of one of the most distinguished and influential modern architects. Explains the organic theory: simplicity and continuity are the means to achieve it. Form follows function. Every method and every material might speak for itself.

Five new resources used to make living easier and better are: (1) reality in buildings' exterior - form and function become one in design; (2) glass - super material, by it ground enters into the building; (3) continuity - steel is its prophet and master; (4) recognizing the nature of the material; and (5) integral ornamentation. Ideas concerning the ideal house for a democratic American are also pointed out.

Wright's ideas put a great deal of emphasis on nature. Good source of ideas for persons who are planning to build a house or who are interested in houses. 212 illustrations supplemented the text.

Wright, Russel and Mary. Guide to Easier Living. New York: Simon and Schuster, 1954.

Content is explained using common examples. Simple vocabulary. Floor plans, furniture arrangement, and house plans are included. Source of information for people who are planning to build or buy a house. Ideas for planning everything in the home. Includes outdoor and indoor living. The basic steps in planning each area of a house - living room, dining room, bedrooms, bathrooms - are considered. The qualities of living of each one of the rooms in a house are also explained. The appropriate furniture and its arrangement in the house are discussed.

Zevi, Bruno. Architecture As Space. New York: Horizon Press, 1957.

A history of buildings from a modern perspective. Includes such structures as fountains, columns and monuments with the more conventional temples, palaces, cathedrals and commercial and dwelling units. The author subjects all edifices to aesthetic, cultural and functional criteria. Abundantly illustrated discussion. Architectural examples

from many periods are chosen to illustrate similar principles which results in stimulating and provocative comparisons. Form, movement, force, vitality, balance, light, shade, symmetry, rhythm, mass, volume, emphasis and character in architecture are discussed.

### CHAPTER III

#### PUERTO RICAN LIVING CONDITIONS

The island of Puerto Rico is situated about 1000 miles southeast of Florida in the Caribbean Sea. It is the easternmost and smallest of the Greater Antilles. Rectangular in shape, the island is about 100 miles long and 35 miles wide. Its climate is tropical. The 1960 population was 2,349,544; nearly three times the 1899 population of 953,243.

The rapid growth and development of Puerto Rico has brought about a kind of urban development that is far from ideal. This period of greater industrial development and higher income for labor has raised the standard of living on the island and as a result many private housing projects have been constructed and many others are in the process of construction.

Where a person lives and how he lives determines the view which he has of his place in the community, his role, his status, and his style of life. People frequently see the home as an outer shell of the self. Consequently, a major change in housing conditions implies a major adjustment of a person's self-concept.

"Housing has been one of the high priority programs in government planning in Puerto Rico. To all who believe in human progress, who believe in the dignity of man, and who have faith in human capacity for betterment, good housing is of supreme importance. From the dim beginnings of mankind to this halfway point in the twentieth century, decent and comfortable shelter has been the aspiration of even the lowliest of human beings. A house gives protection from the elements; transformed into a home it becomes a bulwark of civilization. In Puerto Rico we have, in recent years,



given housing a high priority," stated Luis Munoz Marin, Ex-governor of Puerto Rico.<sup>1</sup>

Puerto Rico's government has in force several programs for better housing. One of these is the Social Program Administration through which economic and technical assistance is provided to help create new rural and urban communities and to improve the existing ones.

Under another agency, the Urban Renewal and Housing Administration, vast new public housing developments are being constructed in every large town and city on the Island. The Urban Renewal and Housing Administration is pushing a three part plan to provide 90,000 homes for people in the low income bracket, but who are on a higher scale than the low income rural families. This project is expected to cost some 50 million dollars. This agency is also currently working on a 97 million dollar program which will create more than 10 thousand middle and lower income homes and improve 4,000 potential housing areas around the Island.<sup>2</sup>

As an indication of the movement toward the construction of higher priced homes, the Federal Housing Administration reported 6,700 residential mortgage loans in 1960, totalling 63 million dollars; a marked increase over the previous year's 4,932 loans valued at 45.4 million dollars. In 1939, the FHA made only 14 loans valued at 61,900 dollars. In 1963, the total amount of Federal Housing Administration mortgages and loans was 122,164 dollars. This indicates the kind of urban development occurring in

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<sup>1</sup>Ralph Hancock, Puerto Rico, a Traveler's Guide (New York: D. Van Nostrand Company, Inc., 1962), p. 160.

<sup>2</sup>Ibid., p. 163.

Puerto Rico.<sup>3</sup>

About two-thirds of the FHA home mortgages fall into the 7,000 dollar to 10,000 dollar range. Apartments include those in condominiums where each tenant may buy his own apartment. Condominium apartments sell for 15,000 dollars to 35,000 dollars for two and three bedrooms, depending largely upon the location.<sup>4</sup>

By the end of 1960, five new multi-family apartment buildings were under construction in San Juan (the capitol city of the Island) with a value of 12.5 million dollars.<sup>5</sup>

Housing, modern furnished or unfurnished, in multiple family apartments or private dwellings, is available for lease or purchase. Rates vary widely, but for urban or metropolitan housing comparable to that in the United States, the costs in Puerto Rico are 10 to 25 percent higher.

Today, people in Puerto Rico enjoy a higher standard of living than in years before. This is a result of the trend toward higher family incomes. Table I shows the Puerto Rican family income for 1959.<sup>6</sup>

According to the Census of Housing, 1960, the housing units in Puerto Rico numbered 521,959. Of these, 248,827 were urban and 273,132

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<sup>3</sup>Robert Weaber, Seventeenth Annual Report of Housing and Home Finance Agency, (Washington: U. S. Government Printing Office, 1963), p. 80.

<sup>4</sup>Ibid.

<sup>5</sup>Hancock, loc. cit.

<sup>6</sup>United States Bureau of the Census, Eighteenth Census of the United States: 1960. Population, Vol I (Washington: U. S. Government Printing Office, 1963), pp. 133-134.

TABLE I  
FAMILY INCOME 1959

<u>Amount of Income</u>	<u>Number of Families</u>
Under \$500	111,442
\$ 500 to \$ 999	35,410
1,000 to 1,999	61,124
2,000 to 2,499	35,818
2,500 to 2,999	21,818
3,000 to 3,499	17,933
3,500 to 3,999	13,173
4,000 to 4,999	19,609
5,000 to 5,999	11,725
6,000 to 9,999	20,501
10,000 to 14,999	6,288
15,000 and over	3,136

were rural.<sup>7</sup>

The total consumer purchases in house furnishings and equipment rose from 5.9 million dollars in 1940 to 17.2 million dollars in 1955. Property ownership becomes more and more an index of social esteem. It can be appreciated from the rise in expenditures on owner-occupied dwellings for the period of 1940 to 1955 from 17 million to 71 million dollars, and on tenant-occupied dwellings from 12 million to 28 million dollars.<sup>8</sup>

In a study carried out in Puerto Rico in 1960 by the Puerto Rican Housing Authority and the Social Science Research Center of the University of Puerto Rico, persons with low incomes were asked two questions on the general importance of housing conditions. The first question was: "Is it important for you to buy a house?" Practically all the respondents, 391 of 405, answered yes. The following question was: "If you were to win in the lottery, what would you buy first?" Four out of five persons chose a house.<sup>9</sup>

Despite this significant advance in modern urban life in Puerto Rican society, its knowledge of interior design is unquestionably incomplete and below the level of other countries such as the United States and countries in Europe. Urban development has brought about the need for this knowledge.

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<sup>7</sup>United States Bureau of the Census, Eighteenth Census of the United States: 1960. Population. Vol I (Washington: U. S. Government Printing Office, 1963), pp. 133-134.

<sup>8</sup>K. Gordon Lewis, Puerto Rico, Freedom and Power in the Caribbean (New York: M. R. Press, 1963) p. 242.

<sup>9</sup>Kurt Back, Slums, Projects and People, Social Psychological Problems of Relocation in Puerto Rico. (Durham: Duke University Press, 1962), pp. 39-40.

Most families have the opportunity to build a house, but in many cases, because of a lack of knowledge, the houses they construct do not fit their needs and wants.

The Cooperative Agricultural Extension Service in Puerto Rico, as an educative agency involved in public affairs and studying the problems and needs of the people, has become conscious of this situation and is intensifying its work through one aspect of the home economics program in an effort to help these families furnish their houses and improve their way of life.

It is an important part of the Home Economics Educational Program of the agency on the Island to teach the aspects that concern housing for the family and the furnishing of the house.

In Puerto Rico there are 67 Agricultural Extension Service Offices established in different towns which are visited by families seeking information in relation to interior design. At this time, the agency does not have enough appropriate educative material and the home demonstration agents working for the agency do not have sufficient knowledge or experience in the field of housing and furnishing to give the correct assistance, direction and orientation that many families on the Island need.

## CHAPTER IV

### THE HOUSE AND ITS DESIGN

Part of the purpose in reviewing literature in the field of interior design is to familiarize myself with many of the standard works to get knowledge and understanding of the factors considered.

For this study, books pertaining to the field were read, summarized and annotated. All of the books were considered of value for the work carried out by a Home Economics Agent in the Agriculture Extension Service in Puerto Rico.

#### I. HOUSE FINANCING

The information found in some of these books is especially useful as teaching material in some of the Home Economics Extension educational programs. Those in particular which tell of different housing finance organizations and their standards can be of great value to families who are planning to build or buy a house.

As a result of the urban development occurring in Puerto Rico, many private housing projects have developed and many others are being planned. There are some housing finance organizations in Puerto Rico such as the Federal Housing Administration, the Veterans' Administration, commercial banks, the Government Employee Association, the Teachers' Association, and the Farm Home Administration, that offer credit to families building or buying a house. With this credit available, many families have bought

houses and others have the opportunity to buy homes who would otherwise not be able to do so for many years or possibly never. It can be said that approximately 80 percent of more of the families in the Island buy their homes using credit. However, many persons do not have sufficient knowledge about the different housing finance institutions and their standards. Most of them know that one of these organizations is financing the construction of their house and that they have to pay a certain amount monthly, but that is all. This situation is a result of the following: the private housing projects all have an office with two or three employees who supply a form that all prospective home owners must complete. This form usually asks for the occupation, salary or other earnings of the person, in addition to the amount of property owned and the amount of the person's savings account. Then, the secretary makes all arrangements with the finance organization if the applicant qualifies for credit. Most of the time, the owner of the home knows only the total cost of the house and the amount of the monthly payments.

Puerto Rican families are in need of information about the types of financing available to them. There are three types of financing in the Island: Federal Housing Administration, Veterans' Administration, and conventional financing.

The conventional type of financing is the traditional one which involves no government support. Most of these loans are made by commercial banks. In Puerto Rico there are several commercial banks that offer credit in House construction. They are the Chase Manhattan Bank, the First National City Bank, the Royal Bank of Canada, the Bank of Nova Scotia, the Federal Savings and Loan Association, and the United Federal Savings and Loan, in

addition to nine local banks of which the Banco Popular and the Credito y Ahorro Ponceño are the largest.

The Federal Housing Administration is probably the best known of the housing finance agencies in Puerto Rico. However, there is a misunderstanding among the people about the function of this institution. Most people believe that the Federal Housing Administration is the institution which makes the loan, but this is not the case. The Federal Housing Administration insures mortgages to guard against loss on the part of the lending agency in case of default by the borrower. The Federal Housing Administration insures mortgages in single family homes in amounts up to \$25,000 at 5 1/4 percent interest for a term of up to 35 years.

The Veterans' Administration is similar to the Federal Housing Administration, but instead of insuring loans, they guarantee the loans. The persons who can receive benefits from this institution must be veterans. The Veterans' Administration will guarantee loans up to 60 percent of the amount of the loan for a maximum term of 30 years.

The Government Employee Association also finances house construction or purchasing, but only those government employees who are members of this association can obtain a home loan. This is the case with the Teachers' Association; to get a home loan from this association the applicant must be one of its members.

In Puerto Rico there are cooperative housing projects organized among groups of from 50 to 100 persons or more who are interested in building their own homes. They hold various meetings to select the land they want to obtain for the project, and to establish an amount of money each party must contribute in order to pay for the land. After the land



has been purchased, any housing finance agency will usually lend money to an organization to carry out the project. These cooperatives must be approved by the government.

The Farm Home Administration makes loans to farmers for house construction.

## II. COLOR

Another area of interior design, of which the families on the Island have insufficient knowledge, is the use of color.

Their Spanish ancestors bequeath to Puerto Ricans a tendency to prefer the use of brilliant colors and the combination of many of them in home embellishment or beautification. It is common in the Island to see the use of six or seven different colors in a room decoration without regard to rules of color combinations. Most of the people in the Island do not know how colors can be combined following certain recommended rules. They use as a rule what their taste commands.

Most of the Puerto Rican families do not realize the importance of colors in the home. Colors are a means through which the personality, the character, and the taste of a family can be seen.

Colors have some psychological effects on the persons who live in the house or who visit the home. For example, colors can be classified as warm colors and cool colors. Red, orange and yellow are classified as warm colors because they make people think of the sun and the fire. Blue, green and violet are called cool colors because they make people think of the water and the sky. Warm colors make persons feel a warm atmosphere in

the room. Cool colors make persons feel a cool atmosphere in the room.<sup>10</sup>

Another psychological effect of color is in relation to human personality. Warm colors are bright colors which are appropriate to and are the favorites of those persons whose characters are vivid, exalted and expressive. The cool colors are the favorites of the calm, shy, serene characters. These characteristics in colors should be kept in mind when a scheme of colors is going to be selected for a room decoration. It is obvious that the most appropriate colors to be used for a quiet, reserved person are the cool colors. Likewise, the warm colors should be used to decorate the house of a person with a vivid, expressive personality.<sup>11</sup>

The location of a room also affects the selection of colors. A room located on the west or south side of a house, available to bright sunlight for most of the day should be decorated in cool colors; blue, green, or violet. The colors' effect is to make the room appear fresh. A room located on the north side of a house, or wherever the light is shadowy, can be decorated in red, orange or yellow to make the room appear warm.<sup>12</sup>

Colors in rooms have optical effects. Cool and light colors make a room appear larger; warm bright colors make it appear smaller. White or light colored ceilings make a room look higher. In Puerto Rico, many houses constructed a number of years ago have high ceilings. These small, high ceilinged rooms can achieve better visual proportions by extending the

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<sup>10</sup>Harriet and Vetta Goldstein, Art in Every Day Life (New York: Macmillan Co., 1954), p. 196.

<sup>11</sup>Ibid.

<sup>12</sup>Ethel Lewis, Decorating the Home (New York: Macmillan Co., 1943), p. 59.

ceiling color down the side of the wall a bit. Also, the apparent size of a small room can be increased by painting all moldings and trim the same color as the walls.

For the Puerto Rican houses where the rooms are small in size, the use of many colors, as is now common, is not a good practice as the use of many colors in a small room reduces its apparent size. It would be better to use a simple color plan. Spacious areas are more appropriate to elaborate color schemes.

The most important thing concerning the use of colors in the home is the selection of a correct and appropriate color scheme. This is one of the most common deficiencies in Puerto Rican home decoration. As stated before, the use of many colors in the house is favored in the Island. Being small, most of the houses do not benefit from this practice. It can be said that most of the people do not know how to select a correct color combination. However, they demonstrate interest in learning how it is done.

There are several rules that should be kept in mind in relation to color schemes used in the home. One of these is that varying color schemes in adjoining rooms account for lack of unity in style. In an entrance hall, which is a room of passage, strong or brilliant colors may be used to achieve a dramatic effect. In the living room, which is nearly always next to the entrance, a middle value of the same color with accents in different shades is recommended.<sup>13</sup>

There are three major classifications of color schemes. Any of them is appropriate for use in a room after considering the location of the room,

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<sup>13</sup>William Pahlmann, The Pahlmann Book of Interior Design (New York: The Museum of Modern Art, 1949), p. 54.

its size, the family taste and personality, etc. These classifications are: monochromatic or one-color schemes; complementary or opposite schemes; and analagous or adjacent schemes.

It is necessary to teach Puerto Rican people what a color wheel is and its use in the selection of color schemes. The use of a color wheel makes it easier to explain and to understand the methods used in the selection of the three basic color combinations or schemes.

A color wheel includes the primary colors which are red, yellow and blue. These are called primary because they cannot be obtained by mixing other colors. It also includes the secondary colors; orange, green and purple or violet, which are obtained when two primary colors are mixed in equal amounts. When a primary color and an adjacent secondary color are mixed, an intermediate color results. There are six of these intermediate colors; yellow-green, blue-green, blue-purple or blueviolet, red-purple or red-violet, red-orange, and yellow-orange.

Using a color wheel, a monochromatic color combination can be chosen using only one color. The pure color, which can be red, blue or yellow, with its shades and tints is used. A complementary or opposite scheme can be made by selecting any opposite colors. An analogous or neighboring scheme can be made by selecting colors that are adjacent on the color wheel. In other words, any color combination derives from the use of colors that blend or contrast pleasantly.<sup>14</sup>

Besides the color wheel, color schemes can be obtained from various

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<sup>14</sup>Goldstein, op. cit., p. 175.

inspirations: a painting, a fine rug, a wall hanging, a piece of old china, a view or a fabric. There are some important general rules that should be kept in mind when color combinations are being selected. It is a good practice to have decorative objects or upholstered furniture in pairs in a room in the same color tones. It is considered safer to choose a color scheme which blends well and to provide other colors in accessories. Accents should be distributed carefully, so as not to overbalance one side of a room. In any color arrangement there should be one outstanding color. Backgrounds should show less emphasis than the objects placed against them.

The important color terms that should be known are hue, value, intensity, shade, and tint. Value is the term used to indicate the lightness or darkness of a color. Intensity tells the brightness or dullness of a color. A tint is a color lighter than the normal one found on the color wheel, and is obtained by adding white. A shade is a color darker than the normal one, and is obtained by adding black. Hue is the name of a color.

### III. HOUSE FURNISHINGS

With the increase of family income in the Island the standard of family living is rising also. The educational level of the Puerto Rican people has also increased rapidly. When a person becomes well educated his desire to live in better homes with better living conditions is obvious.

Most houses on the Island are small and regular in shape. The cost of construction is high, approximately \$9.00 per square foot, and it is expected to continue to rise. The consequence is that the size of most new

houses is small. The bedrooms are especially small, being approximately 9' X 12'. These small bedrooms may also contain besides the built-in closet, a wardrobe or portable closet which in most cases is not a necessary item. The bedrooms also contain a bed, one or two tables and a chair. In the living rooms, which are also small in size, the furniture is large scale, of massive wood, heavy and elaborated to such an extent that there is little space allowed for traffic. In addition, Puerto Rican families commonly arrange furniture in front of the doors that give passage to other rooms, which also interrupts the traffic to other areas.

Puerto Rican families like an excess of decorative accessories in their homes. They enjoy buying plastic flowers to make flower arrangements; pottery, decorative miniatures of animals, dolls, and other figures; vases; ash cans; flower pots; etc. In most houses, these decorative objects are placed without regard to balance and symmetry.

The Puerto Rican family needs information regarding good practices in furnishing a home. They especially need information concerning the selection and arrangement of furniture.

Each room should be carefully analyzed and furniture selected to meet the necessary functions of the room. The wall space available, the room size, and the cost are important factors that should be considered when home furniture is going to be purchased.

Modern decoration emphasizes the use of line, texture, fabrics and materials in furniture. Compactness, convenience and comfort are the qualities most furniture designers strive for today.<sup>15</sup>

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<sup>15</sup>Gladys Miller, Furniture For Your Home (New York: M. Barrows and Company, 1946), p. 78.

There are a number of requirements that should be met when furnishing the different rooms in a house. The entrance hall should offer some form of seating. It can be a chair, a bench, or a small sofa. A table, an ash tray and a mirror should also be provided. The living room needs as a minimum, seating for six. This can be a sofa, two arm chairs and an upholstered chair. The sofa is an indispensable piece of furniture in the Puerto Rican living room. The style of the sofa is determined by the family preference, the size of the room, and the amount that can be spent for it. A conversational grouping in the living room is important. It can be accomplished with two chairs or two arm chairs, a table and a sofa.

In the dining room, essentials are four to eight chairs, a table and a buffet or side board. The dining room should be furnished simply. In the bedroom it is necessary to have a good and comfortable bed, a chest of drawers, a chair and a mirror.<sup>16</sup>

One of the most serious problems in interior design in the Island, as stated before, is concerned with furnishing the house. Of particular concern is the problem of furniture arrangement in the living room. Figure 1 shows the most common way of arranging furniture in a Puerto Rican living room. The living room in most of these houses has three or four doors, and its dimensions are usually about 10' X 12'. The furnishings are placed in diagonal lines in the center of the room instead of close to the wall, which would allow more space. The television, radio and phonograph are located in the living room in most homes. Figure 2 shows the recommended way of arranging the furniture in a Puerto Rican living room.

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<sup>16</sup>James and Katherine Ford, Design of Modern Interiors (New York: Architectural Book Publishing Company, 1943), pp. 37-53.

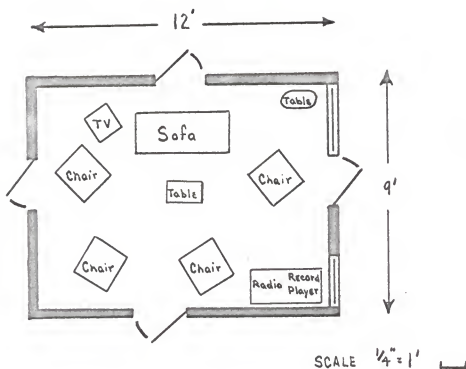


FIGURE 1  
PUERTO RICAN FAMILY COMMON  
FURNITURE ARRANGEMENT



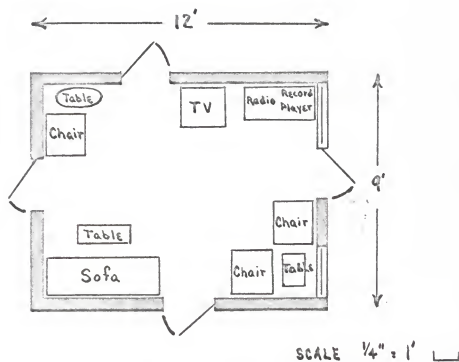


FIGURE 2

A RECOMMENDED FURNITURE ARRANGEMENT  
FOR A PUERTO RICAN LIVING ROOM

Two important factors considered in grouping furniture are comfort and convenience. The chairs, the tables, the armchairs, the sofa and the lamps should be placed where they are convenient and allow clear passageways between doorways and the various centers of activity in the room. The furniture and lamps should not have to be moved every time they are used.

In the living room there should be a place for talk; a place for each member of the family to read, with comfortable chairs and a table or surface nearby; and convenient, well designed lamps. There may be a music group separated from the conversation center. A desk with good lighting for writing can be included. The sofa can be used to divide the dining area and living area if they are both in the same room, as is common in Puerto Rico.<sup>17</sup>

Besides considering the various groups that should be included in a living room, the furniture must be arranged appropriately. The large pieces of furniture should be placed to follow the lines of the room and to balance each other against the four walls. This will leave the center free to create a maximum impression of space. The shape of each piece should be in harmony with the background.

In the Island it is also common to see many family portraits in the living room of the home, some of which are old fashioned portraits. A portrait may be hung in the living room if it is an addition to the decor of the room or if it is especially important. However, some portraits might be more appropriately hung in a bedroom or kept in a scrapbook.

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<sup>17</sup>Donald D. Mcmillan, Good Taste in Home Decoration (New York: Henry Holt and Company, 1954) p. 303.

Pictures are usually hung very high in Puerto Rican homes, despite the fact that they should be hung at the height of the eye level of a person in order to get the best effect. However, there are some decorative arrangements in which pictures are hung lower. Pictures can be hung above the table or above the sofa very effectively. An interesting picture arrangement that could be used in Puerto Rico is the grouping of many pictures on a wall. In most of the Island homes there are many pictures, especially in the living room where each wall has some pictures. It is better to group them over the sofa to make a center of interest in the room.<sup>18</sup>

For publicity purposes, the commercial stores in the Island give almanacs to their clients at the beginning of each new year. These almanacs are often hung in the living room as a decorative accessory. A more appropriate room in which to hang the almanac is either the kitchen or bathroom.

Another custom common in the Island, as stated before, is the exaggerated use of decorative accessories. Most of these are selected and used incorrectly. Families in the Island are lacking information relating to the selection and use of decorative accessories as a means to add beauty and embellishment to their homes.

Line, form, color and texture are four aspects of design that are important in the selection and use of decorative accessories. Puerto Rican families lack the necessary knowledge of design to choose their accessories well. For example, favorite decorative objects in Puerto Rican

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<sup>18</sup>E. W. Commerly and E. C. Stephenson, How to Decorate and Light Your Home. (New York: Macmillan Co., 1954), p. 5.

are flower pots or vases. Many of these are highly ornamented with varied colors, elaborate lines and rough textures. All of them should be used alone without flower arrangements as they alone are beautiful decorative accessories. However, many persons buy plastic flowers in many colors and put these into the vases instead of using plain or simple flower pots to hold flowers. A decorative accessory should meet the requirements of being beautiful, suited to its purpose, well proportioned, and suited to the material of which it is made.

Balance is an important principle of design to be considered in the placement of decorative accessories. There are two kinds of balance, formal and informal. Formal balance is achieved when the objects on each side of the center are identical. The second type of balance; informal or asymmetrical, is more subtle than formal balance and gives more opportunity for variety in arrangements.

In the selection of decorative accessories, their interest value should be kept in mind. The background used for decorative objects, such as a wall or table, should be unobtrusive as decorative objects should be placed against backgrounds that permit them to be seen. The decorative objects can supply accents of bright color in a room, and should be arranged so that they will appear to be unified rather than scattered. An interesting idea is to hang a picture, a textile or a mirror close enough to a shelf or a piece of furniture that it becomes a part of a group. Small pictures should be hung so that they will become a part of a decorative group. A decorative object should be large enough for the space it is to occupy. Smaller objects should be grouped so that they will appear to be in scale with larger objects, or with a wall space. The pictures should be placed so that

the lines of the composition will lead toward a center of interest. One object or a group of objects should be chosen to stand out as a principal center of interest.<sup>19</sup>

There are various ways to achieve rhythmic effect in decorative arrangements. One of these is by means of the connecting lines of a tray or plate, a plant, flowers or other object. Another means is the use of a horizontal shape between two verticals, or by grouping a horizontal with a vertical shape. Rhythmic effect can also be achieved by using varied heights and sizes in the arrangement.<sup>20</sup>

The architectural design in the Island is characterized in most cases by placing the living room in the center of the house where it is necessary to pass through the living room to get to other rooms in the house. As a result, there are about three or four doors in the living room. The Puerto Ricans usually hang curtains in these doors to cover the passage from the living room to the other rooms. The design of the material is usually not appropriate to this use. The Island families can benefit from information offered in this area. For example, if the walls of a room are definitely figured, plain curtains should be selected. Plain materials should also be chosen for rooms with walls that are plain or have a comparatively inconspicuous pattern if there are many pictures and much pattern in the furniture and rugs in the room. Plain curtains the same color as the walls will seem to become a part of the walls and will enlarge the room. A plain curtain is more appropriate to be used in small rooms than the ones commonly used in Puerto Rico.

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<sup>19</sup>Pahlmann, op. cit., p. 146.

<sup>20</sup>Ibid., pp. 136-127.

Another problem in the Island is in relation to window treatment. In choosing curtains with a pattern, size of the rooms, the general color of the furnishings, and the personality expressed in the room should be considered. It is a good practice to arrange the material in folds as though it were hanging in the windows when the fabric is being selected. This is a way to check the appearance of the design; if it is spotted or shows too much line movement. It should be held against a window to see how it will look when the light shines through it. Also, it is recommended to try a sample in the room where it will be used to see what effect its colors will have on the other furnishings. <sup>21</sup>

Beautiful curtains need to be of sufficient fullness. A well selected curtain provides a means for the introduction of pattern and color in a room. Some rooms need curtains next to the windows for privacy and to soften the light; for these purposes then, curtains may be chosen.

There are some fabrics that lose their beauty when seen against the light. These should be lined so that the design can be seen inside. It is important to select colors for curtains and for linings that will look well with the exterior of the house. An ivory tone is the most common color used in linings, but other colors may also be used.

The scale of the pattern should be adapted to the size of the room and the size of the windows. Small and simple designs are more appropriate for small rooms. The type of design or pattern depends upon the general purpose of the room. There are some patterns such as stripes or geometric figures more appropriate for family rooms. Flowers and abstract designs

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<sup>21</sup>Ibid., p. 79.

are more appropriate for living and dining rooms.

Curtains should be allowed to hang straight and repeat the line of the window rather than to be looped back tightly. Curtains in the windows can be hung inside the wood trim or outside, depending upon the effect desired. If the curtains are floor length and the valance omitted, the windows will appear longer. If a valance is used and the rods extended beyond the windows, the windows will appear wider.

Lighting is another problem in Puerto Rico. There are many hucksters that go from house to house selling ornate, eccentric and large scale lamps that are also too expensive. They offer credit accounts and most middle class and low class families buy these lamps that are not appropriate for their small living rooms. Another lighting problem in the Island is due to the incorrect distribution and control of lighting. Often there is too much or too little light in a room. Much of the comfort of a room depends upon the appropriate lighting. Some of the most important factors in lighting are: well chosen lamps for color, well designed and well placed for the correct distribution of light.<sup>22</sup>

There are two types of illumination, general and local. General illumination is used when general activities are carried on. Most of the time it is provided by the use of ceiling lights. The kitchen is one of the rooms where general illumination is used. It is recommended that general illumination always be supplemented with some local lighting. Local lighting is provided through the use of local lights in areas for specific

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<sup>22</sup>Commercy, op. cit., pp. 183-228.

purposes such as reading, writing or sewing. The standard for lighting a room, from the point of view of eye comfort as well as beauty, is a softly diffused light that will be similar to a well lighted room in daylight. Lamps should be distributed in a room to provide adequate light in every place.

The design of the lamp should suggest its purpose, and all eccentric shapes avoided. The lamp base should be beautiful in structure and well balanced. The lamps should be low enough to group with the furniture and it would be best if all the lamps in a room were of the same height. However, the correct height for each lamp depends upon how it will be used. The light should always be above the line of vision. For example, a person who is working on a table or desk should have the bottom of the lamp shade about nineteen inches above the surface of the table.

In selecting colors for lamp shades, the color effect in the room in daylight should be considered, as well as how it fits into the general color scheme and the effect it gives in the room at night. Hard, bright colors such as red and bright rose are not pleasing for lamp shades and change the quality of the light. White shades, creamy white, softened tints of yellow-orange, orange, and red-orange are good choices.

The floors in the Puerto Rican houses in the low middle and low class families are often bare. The floors are of wood or tile or cement. The middle class families, high class families and upper class families use carpets and rugs. Floors in these homes are in vinyl, cork, rubber, wood, marble and tile.

Floors and floor coverings are also an area in which Puerto Rican families need information. The floors and floor coverings should be dark



enough to give the room a good foundation. Very light or too dark floors are not practical because they show footprints and are not easy to keep clean.

Rugs should harmonize or contrast with the walls. If a contrasting hue is chosen it is desirable to repeat some of the color in curtains, pictures, or a hanging so that the room may appear to be balanced in color. Plain rugs or those having an interesting texture make a good background. A plain carpet is more appropriate to use in small rooms because it makes the room look bigger. The rug that leaves only a narrow border of floor also gives an effect of increased space. However, small rugs make a room look smaller.

#### IV. HOUSE PLANNING

The planning of a house depends upon many factors. Some of these are the social values and the economic factors. In addition to these, the physical factors such as climate, location, and availability of materials are also considered in house planning. Many times what is considered functional for one family may be nonfunctional for another family. Ease of circulation, various aspects of privacy, and physical comfort are important in house planning. The problems of circulation and floor area are resolved in house planning if the family makes a complete analysis of its needs and characteristics. This analysis should include the number of people who are going to occupy the house, their age, sex, and the family income. Also it includes site, house orientation, relationship to surroundings, and all other technical and economic limitations.<sup>23</sup>

House planning also includes the coordination of the family needs with a functional and beautiful design. Planning a house includes the same principles and techniques as does planning or design in other structures. The first step in the house planning process is the development of a program stating the needs of the family in terms of their interests and financial limitations.

The family needs and activities are considered as one of the most important factors in house planning. In addition to providing physical comfort and protection from the weather, the design must also consider the spiritual and emotional qualities.

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<sup>23</sup> Frank Lloyd Wright, The Natural House (New York: Horizon Press, 1954), pp. 139-178.

The planning of the house should begin with a careful analysis of the characteristics, interests, and needs of the family. It includes the consideration of areas for recreation, cooking, eating, sleeping, sanitation and storage. This plan should be a guide that will give a clear idea of the general character of the family and the kind of house needed.<sup>24</sup>

After this analysis of the family, which will determine the size and cost of the house, consideration should be given to the setting of the house. If the new home is to be satisfactory, the site must be in a neighborhood with the maximum number of desirable conditions. The prospective neighborhood should be studied to determine the stage of its development. The location must be related to transportation, schools, churches, shopping centers, and other necessary work or recreational centers.<sup>25</sup>

The site should meet several characteristics, such as size, shape, and topography. Any of these qualities influence the design of the house. For example, a large, level lot will permit almost any kind of house in size and shape. In contrast, on a narrow lot the house should conform to the width, with the maximum space on either side for privacy. Lots with peculiar shapes may influence the location of the house or of the rooms. In sloping lots unusual plan levels can be designed.<sup>26</sup>

After the site is selected the orientation of the various rooms of the house is determined. Then a detailed planning process may begin. One

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<sup>24</sup>Elizabeth Mock, If You Want to Build a House (New York: Simon and Schuster, Inc., 1946), p. 6.

<sup>25</sup>Ibid., pp. 10-40.

<sup>26</sup>Frank Lloyd Wright, The Natural House (New York: Horizon Press, 1954), pp. 139-145.

of the first considerations is the relationship of the rooms to each other. In other words, the various rooms of the house must be placed together in such a manner that the house functions efficiently.

The planning of divisions of the different rooms in a house should be done by considering the type of equipment which they usually contain. The living room, dining room and bedrooms are likely to have movable furniture, permitting flexible and temporary arrangements. The kitchen, bathroom, storage spaces, laundry, and other service areas usually have built-in equipment and are often planned more by rule than are the living areas of the house.<sup>27</sup>

In planning a house there are some possibilities of a multi-purpose room. This type of room can be used for different purposes varying the equipment. A dining room, for example, might be furnished in such a manner that it could also be used for studying, or as an auxiliary living room. Adequate storage is important in this room. The development of multi-purpose rooms usually results in economy of construction, space, costs, and maintenance.

Zoning of rooms alike is also necessary in house planning. The more private areas of the house should be zoned from the public; noisy places from the quiet; kitchen confusion and odors from the living room.

In the living room the windows, wall spaces and movable furniture should be considered as design elements. For the living room itself a study should be made of the groups of furniture in terms of the activities to be carried on within the room. There should be provision for recreation, for adults and for children. This recreation may be of the active type, such as

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<sup>27</sup> Ibid.

children's parties or dancing; or it may be quiet relaxation, including conversation, reading and music. The furniture to accommodate such daily activities should be grouped not only for function but should also be composed around one of two centers of interest. At this time can also be considered some details such as the selection of materials, textures and colors for floors and walls.

The kitchen is the most important service unit of the house. It should be designed for ease of operation and maintenance. The present-day kitchen is usually planned as a series of areas, each devoted to a specific function. Near the rear entrance should be located the refrigerator and storage area with its shelves, in order to save time and energy for the housewife. Next should be the work area with its sink and counter space for the preparation of food. This usually serves also as the cleaning or dishwashing area. Adjacent to the dining room should be located the cooking and serving area with its range and serving space to save time and energy. Kitchens may be classified according to the shape of the room and the resulting arrangement of the equipment. The U-shaped kitchen is the most desirable with the food-preparation area located in the closed end of the "U" and the storage and cooking areas on the sides. The U-shaped kitchen permits the development of a centralized work space with no traffic passing through this area. Other typical kitchens are those which are L-shaped and corridor-like in their plan arrangements.<sup>28</sup>

Bathrooms, storage closets, and laundries should also be planned from the standpoint of convenience and efficiency. The various fixtures,

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<sup>28</sup>Virginia Wheeler, Kitchen (New York: Abelard Schuman, 1956), p.25.

shelves, and cabinets may be arranged with the different activities typical of each room in mind.

It is necessary then, to provide information about interior design to the Puerto Rican people in order to solve the problems that exist in the Island in the appropriate use and arrangement of space according to needs; furniture arrangement; the allotting of the budget; color; windows and their treatment; floors and their coverings; lighting and the selection of lamps; and the appropriate use of decorative accessories.

## CHAPTER V

## CONCLUSIONS

During approximately the last twenty years there has been a great improvement in living conditions on the whole Island of Puerto Rico. Family yearly income has increased, educational levels have been raised, better commercial stores have been established, better ways of communication and many other improvements have been made. All of them have helped to develop the great interest existing in Puerto Rican families to improve their living conditions.

It can be stated that as a consequence of the great urban development occurring in Puerto Rico, the prospective families of new houses are seeking information in relation to interior design. They also need information in relation to the different types of house financing and the different house finance organizations and their standards.

It can be stated that not only the prospective families of new houses lack information in relation to interior design, but most of the families on the Island lack knowledge in this field. This situation, also, can be explained as a result of cultural influences or traditional customs.

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A REVIEW OF LITERATURE IN THE FIELD  
OF INTERIOR DESIGN

by

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AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

College of Home Economics

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Manhattan, Kansas

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The rapid growth and development of Puerto Rico has brought about a kind of urban development that is far from ideal. This period of greater industrial development and higher income for labor has raised the standard of living on the island and as a result many private housing projects have been constructed and many others are in the process of construction. As a consequence there is need for information in relation to the selection of furnishings, room arrangement, selection of wall treatment and floor coverings, selection of lamps and lighting and selection of house decorative accessories for the families who are moving into these houses.

The Agricultural Extension Service in Puerto Rico as an educative agency is working toward supplying the necessary information to these families.

Part of the purpose of this study in reviewing literature in the field of interior design is to familiarize myself with many of the standard works to obtain more knowledge and understanding in this specific field of home economics in order to carry out my work of family orientation in the Agricultural Extension Service with the best background and better professional preparation.

The study was carried out as follows: books in the field of interior design and related areas were read and a summary of each one was made. An annotated bibliography was prepared for use as a guide showing the contents of each book and its importance as a source of information in the field of interior design.

The Puerto Rican families are seeking information in relation to two

general areas. The first is house beautification and furnishing using the principles involved in interior design. It is necessary to offer information to the interested Puerto Rican families in the following areas of interior design: color and color schemes; buying and selection of furniture, decorative accessories and lamps; room arrangement; selection and buying of floor coverings and wall treatments. The second area is in relation to house planning. It should include factors to be considered in a house plan to get the best value for the money invested.